Remarks

Table 1 has been amended to indicated SEQ ID: NOs for the sequences. Errors in the sequences have been corrected, support being found in the listing of pages 17 and 18, the table being consistent with that listing, both as to the nature of the receptor and the amino acid sequence.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned **"Version with Markings to Show Changes Made."**

The specification is amended to incorporate a substitute sequence listing that complies with the sequence rules, 37 C.F.R. §§ 1.821 - 1.825. The printed Sequence Listing is identical to the Sequence Listing submitted in machine-readable form. This paper is submitted to comply with the United States Patent and Trademark Office rules governing gene sequences. No new matter is added.

In the unlikely event that the transmittal letter is separated from this sequence listing and the U.S. Patent Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this sequence listing to our **Deposit Account No. 03-1952**. However, the Assistant Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: April 10, 2002   By:

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In order to determine the region on the external domain of a cell surface receptor that is involved in receptor internalization, a sequence similarity comparison was performed. The comparisons were performed with the commercially available Wisconsin Package, version 8.0-open VMS, Genetics Computer Group. The complete receptor sequences were obtained from public databases, as previously described in the "Database References for Nucleotide and Amino Acid Sequences."

The similarity is based on the evolutionary distance between amino acids, as measured by Dayhoff and normalized by Gribskov and Burgess (1986) Nucl. Acids Res. 14:6745-6763. The "local homology" algorithm of Smith and Waterman (1981) *Advances in Applied Mathematics* 2:482, 282-289 finds the best segments of similarity between the two sequences.

A similarity search between SEQ ID NO: [I] 1 and amino acid sequences of the cell surface receptors outlined herein was done, and the regions outlined above were identified, as shown in the table below.

Table 1: Peptides – modulators of cognate receptor activity

Receptor	Sequence	SEQ ID:NO
IR	KTDSQILKELEESSFRKTFEDYLH	SEQ ID:NO 3
IGF-IR	[ERETQIAKGNEQSFRVDLRTLLR] KTEAEKQAEKEEAEYRKVFENFLH	SEQ ID:NO 5
	ARGGTLELRPRSRYRLQLRARLN	SEQ ID:NO 10
TPO-R	QRVEILEGRTECVLSNLRGRTRY	SEQ ID:NO 11
EPO-R	EITTDVEKIQEIRYRSKLKLI	SEQ ID:NO 27
PDGF-R	EARCDFCSNNEESFILDADSNM	SEQ ID:NO 28
VEGF-R	EYELQYKEVNETKWKMMDPILTTSVPVY	SEQ ID:NO 9
GH-R	EWEIHFAGQQTEFKILSLHPGQKYL	SEQ ID:NO 35
PRL-R	KKENKIVPSKEIVWWMNLAEKIP	SEQ ID:NO 6
OB-R	GPHCVKTCPAGVMGENNTLVWKY	SEQ ID:NO 8
EGF-R	EAEAAVATQETSTVRLKVSSTAVRT	SEQ ID:NO 4
LDL-R	EKTDRFVMKKLNDRVMRVEYHFLSPY	SEQ ID:NO 34
Tf-R	TWQTPSTWPDPESFPLKFFLRY	SEQ ID:NO 29
CNT-R		

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GLUT-4	[ERETQIAKGNEQSFRVDLRTLLR] TWLGRQGPEGPSSIPPGTLTTLW	SEQ ID:NO 2
TC-Ra TC-Rp TC-Ry TC-R8	DSQTNVSQSKDSDVYITDKTVL EWTQDRAKPVTQIVSAEAWGRADC SQEGNTMKTNDTYMKFSWLTVPEESLDKEHRCI VRH VHTEKVNMMSLTVLGLRMLF	SEQ ID:NO 30 SEQ ID:NO 31 SEQ ID:NO 32 SEQ ID:NO 33
IL-2Ra IL-2RP	EMQSPMQPVDQASLPGHCREPPPW. DPDEGVAGAPTGSSPQPLQPL	SEQ ID:NO 12 SEQ ID:NO 13
IL-3R IL-4R IL-5R IL-6R IL-7R	QEEGANTRAWRTSLLIALGTLL EPSLRIAASTLKSGISYRARVRAWAQCY DYETRITESKCVTILHKGFSASVRTILQ PAQEVARGVLTSLPGDSVTL GKSNICKVKVGEKSLTCKKIDLTTIVK	SEQ ID:NO 14 SEQ ID:NO 15 SEQ ID:NO 16 SEQ ID:NO 17 SEQ ID:NO 18
IL-8Ra IL-8RP	EVLGNDTAKWRMVLRILPHTF EDMGNNTANWRMILLRILPQSF	SEQ ID:NO 20 SEQ ID:NO 19
IL-9R	ELDPGFIHEARLRVQMATL	SEQ ID:NO 21
IL-IIR IL-12R	EVITDAVAGLPHAVRVSARDFL EQPTQLELPEGCQGLAPGTEVTYRLQLHML	SEQ ID:NO 22 SEQ ID:NO 23
IL-13Ra IL-13RP	KQDKKIAPETRRSIEVPLNERI EWSDKQCWEGEDLSKKTLLRFW	SEQ ID:NO 25 SEQ ID:NO 24
IL-17R	DPNITVETLEAHQLRVSFTLWNESTHYQILLTSF	SEQ ID:NO 26

In order to determine the region on the external domain of a cell surface receptor that is involved in receptor internalization, a sequence similarity comparison was performed. The comparisons were performed with the commercially available Wisconsin Package, version 8.0-open VMS, Genetics Computer Group. The complete receptor sequences were obtained from public databases, as previously described in the "Database References for Nucleotide and Amino Acid Sequences."

The similarity is based on the evolutionary distance between amino acids, as measured by Dayhoff and normalized by Gribskov and Burgess (1986) Nucl. Acids Res. 14:6745-6763. The "local homology" algorithm of Smith and Waterman (1981) *Advances in Applied Mathematics* 2:482, 282-289 finds the best segments of similarity between the two sequences.

A similarity search between SEQ ID NO:1 and amino acid sequences of the cell surface receptors outlined herein was done, and the regions outlined above were identified, as shown in the table below.

Table 1: Peptides – modulators of cognate receptor activity

Receptor	Sequence	SEQ ID:NO
IR	KTDSQILKELEESSFRKTFEDYLH	SEQ ID:NO 3
IGF-IR	KTEAEKQAEKEEAEYRKVFENFLH	SEQ ID:NO 5
TPO-R	ARGGTLELRPRSRYRLQLRARLN	SEQ ID:NO 10
EPO-R	QRVEILEGRTECVLSNLRGRTRY	SEQ ID:NO 11
PDGF-R	EITTDVEKIQEIRYRSKLKLI	SEQ ID:NO 27
VEGF-R	EARCDFCSNNEESFILDADSNM	SEQ ID:NO 28
GH-R	EYELQYKEVNETKWKMMDPILTTSVPVY	SEQ ID:NO 9
PRL-R	EWEIHFAGQQTEFKILSLHPGQKYL	SEQ ID:NO 35
OB-R	KKENKIVPSKEIVWWMNLAEKIP	SEQ ID:NO 6
EGF-R	GPHCVKTCPAGVMGENNTLVWKY	SEQ ID:NO 8
LDL-R	EAEAAVATQETSTVRLKVSSTAVRT	SEQ ID:NO 4
Tf-R	EKTDRFVMKKLNDRVMRVEYHFLSPY	SEQ ID:NO 34

CNT-R	TWQTPSTWPDPESFPLKFFLRY	SEQ ID:NO 29
GLUT-4	TWLGRQGPEGPSSIPPGTLTTLW	SEQ ID:NO 2
TC-Ra	DSQTNVSQSKDSDVYITDKTVL	SEQ ID:NO 30
TC-Rp	EWTQDRAKPVTQIVSAEAWGRADC	SEQ ID:NO 31
TC-Ry	SQEGNTMKTNDTYMKFSWLTVPEESLDKEHRCI VRH	SEQ ID:NO 32
TC-R8	VHTEKVNMMSLTVLGLRMLF	SEQ ID:NO 33
IL-2Ra	EMQSPMQPVDQASLPGHCREPPPW	SEQ ID:NO 12
IL-2RP	DPDEGVAGAPTGSSPQPLQPL	SEQ ID:NO 13
IL-3R	QEEGANTRAWRTSLLIALGTLL	SEQ ID:NO 14
IL-4R	EPSLRIAASTLKSGISYRARVRAWAQCY	SEQ ID:NO 15
IL-5R	DYETRITESKCVTILHKGFSASVRTILQ	SEQ ID:NO 16
IL-6R	PAQEVARGVLTSLPGDSVTL	SEQ ID:NO 17
IL-7R	GKSNICKVKVGEKSLTCKKIDLTTIVK	SEQ ID:NO 18
IL-8Ra	EVLGNDTAKWRMVLRILPHTF	SEQ ID:NO 20
IL-8RP	EDMGNNTANWRMILLRILPQSF	SEQ ID:NO 19
IL-9R	ELDPGFIHEARLRVQMATL	SEQ ID:NO 21
IL-IIR	EVITDAVAGLPHAVRVSARDFL	SEQ ID:NO 22
IL-12R	EQPTQLELPEGCQGLAPGTEVTYRLQLHML	SEQ ID:NO 23
IL-13Ra	KQDKKIAPETRRSIEVPLNERI	SEQ ID:NO 25
IL-13RP	EWSDKQCWEGEDLSKKTLLRFW	SEQ ID:NO 24
IL-17R	DPNITVETLEAHQLRVSFTLWNESTHYQILLTSF	SEQ ID:NO 26